

## CLAIMS

1. System for controlling the transmission power of a base station with which a number of mobile stations are in communication, said base station having power command units which receive respectively the signals intended for said mobile stations and power command signals sent by said mobile stations for commanding the contribution of said signal to the transmission power of said base station, and a summer (10) for forming a composite signal from said signals delivered by said power command units, characterised in that said base station has summation units, the input signals of a given priority level being applied to the inputs of each summation unit which then delivers a sub-composite signal to the input of an attenuation unit whose output is connected to the input of said summer, each attenuation unit being designed to attenuate, by a variable attenuation coefficient, the sub-composite signal at its input when the transmission power of said base station exceeds a predetermined power, said attenuation coefficient being larger the lower the corresponding input signal priority level.
2. System for controlling the transmission power of a base station according to Claim 1, characterised in that said attenuation coefficient of each attenuation unit is a power  $P$  of a base attenuation coefficient, the value of  $P$  being identical for all said attenuation units.
3. System for controlling the transmission power of a base station according to Claim 2, characterised in that each base attenuation coefficient is less than unity, the coefficient of an attenuation unit being closer to unity the higher the corresponding input signal priority level.
4. System for controlling the transmission power of a base station according to one of the preceding claims, characterised in that an input signal intended for a mobile station is assigned to a sub-composite signal at the beginning of the communication.
5. Control system according to one of the preceding claims, characterised in that the assignment of an input signal intended for a mobile station to a sub-composite signal is modified only at the time of the arrival of at least one event which concerns only said mobile station.
6. Control system according to Claim 5, characterised in that said or each event is a change in type of service, reaching of the saturation level, or entry into soft handover of said mobile station.

7. Method of controlling the transmission power of the sending section of a base station SB which receives, on its inputs, input signals  $e_1$  to  $e_N$  which are intended to be transmitted to mobile stations  $SM_1$  to  $SM_M$  attached to said base station SB, characterised in that it consists of forming groups of input signals according to predetermined priority criteria assigned to said input signals and of forming, from said input signals of each group, sub-composite signals, of forming, from said sub-composite signals, a composite signal which is transmitted to said mobile stations, and in that it consists of attenuating said sub-composite signals so that the power of the composite signal is always less than a predetermined power, the attenuation coefficients respectively applied to said sub-composite signals being different according to the sub-composite signals considered.
8. Control method according to Claim 7, characterised in that said attenuation coefficient applied to each sub-composite signal has a value which is greater the higher the priority level of the input signals from which it is formed.
9. Control method according to Claim 8, characterised in that the attenuation coefficients respectively applied to the sub-composite signals are a same power  $P$  of base attenuation coefficients, the variation of said attenuation coefficients being obtained by variation of said value of the power  $P$ .
10. Control method according to Claim 9, characterised in that the value of  $P$  is chosen so as to allow non-exceeding of said predetermined power, the value just below,  $P-1$ , causing exceeding of said predetermined power.
11. Method for controlling the transmission power of a base station according to Claim 9 or 10, characterised in that each base attenuation coefficient is less than unity, the coefficient of an attenuation unit being closer to unity the higher the corresponding input signal priority level.
12. Method for controlling the transmission power of a base station according to one of Claims 7 to 11, characterised in that an input signal intended for a mobile station is assigned to a group for forming a sub-composite signal at the beginning of the communication.
13. Control method according to one of Claims 7 to 12, characterised in that the assignment of an input signal intended for a mobile station to a group for forming a sub-composite signal is modified only at the time of the arrival of at least one event which exclusively concerns only said mobile station.

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